



Waste Lead Acid Batteries: Management Requirements for Generators and Transporters

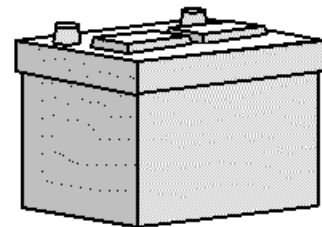
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Introduction to Regulations for Shop Managers and Battery Retailers

Waste lead acid batteries ("batteries" hereafter) are not regulated as hazardous waste as long as they are sent to a recycler and are *not* leaking. The shop operator or retailer, known as the "generator," can accept, accumulate, and ship out batteries for recycling without having to report them to WDNR or to manifest the shipments.

Under 1989 Wisconsin Act 335, the Waste Reduction and Recycling Law, it is illegal to dispose of lead acid batteries in a solid waste landfill or incinerator in the state. If the waste lead acid batteries are disposed of instead of sent to a recycler, they are considered hazardous waste. In such cases, Generators must add the weight of the batteries to their calendar month total sum of hazardous waste.



Most generators would find it impractical to recycle batteries on-site by draining them and cracking them open to recover the lead. However, if they choose to do so, they should be aware that this activity is subject to WDNR hazardous waste licensing requirements.

Retailers and commercial installers of motor vehicle batteries must accept used lead acid vehicle batteries for recycling from individuals during normal business hours, according to s. 287.18, Stats. This service is free to customers who purchase a new battery when they bring in a used one. Customers may be charged fee of up to \$3 if they bring in a used battery without purchasing a new one. Retailers may charge a deposit of up to \$5 when a customer purchases a new battery without turning in a used one. The deposit is refunded when the customer returns to the same retailer with a used battery and proof that the deposit was paid.

The state recycling law requires battery retailers to post a sign stating "Recycle Vehicle Batteries Here". The sign must be 8½ x 11 inches and placed where customers can see it.

Managing Waste Lead Acid Batteries

Spent lead acid batteries are usually worth money, depending on the current market for lead. There are two methods for generators to accumulate and ship batteries off-site for reclamation.

One is to collect only a few and take them to a scrap yard that accepts batteries.

Generators who go to scrap yards should be cautious. Scrap yard operators are subject to the same regulations as shop operators. If the scrap yard operator stores batteries improperly and causes a pollution problem, or if the scrap yard operator simply takes the batteries out and disposes of them illegally, the responsibility for cleanup could still come back to the generator. If you choose to take batteries to a scrap yard you should follow two precautions. First, take a tour of the scrap yard and determine how batteries are stored. They should be properly stored, as described in this fact sheet, and not tossed in a pile. Then, make sure the scrap yard keeps good records of where the batteries are sent.

The second alternative is to collect a larger number on-site and ship directly to a battery recycler. This alternative may be less expensive than taking the batteries to a scrap yard option because it eliminates one step in the handling of the batteries. Using brokers is another way to transport batteries to battery smelting facilities. A list of brokers and recyclers is available in the *Wisconsin Recycling Markets Directory*.

As is true of scrap yards, brokers and recyclers should also be checked out carefully. Battery reclaimers are strictly regulated and information about them can be obtained from the appropriate state environmental regulatory agency.

Management Tips for Generators

- Accumulate only the smallest number needed to make an economical shipment.
- Make arrangements in advance with a responsible recycler, broker, or scrap yard.
- Know where the batteries will ultimately be sent before you start collecting them on-site.
- Check out local ordinances with the fire department, city hall, and county government because they may restrict storage of batteries.
- Never drain the acid from a battery.
- Make sure that employees know how to handle batteries safely, especially leaking ones. Sulfuric acid will burn eyes and skin. It can eat through clothing and other materials
- Always use gloves and eye protection when handling old batteries.
- ALWAYS wash hands immediately after handling old batteries. Acid burns may not be apparent at once.



Waste Lead Acid Battery Storage

If stored improperly, waste lead acid batteries may leak or spill, and cause lead and/or acid contamination of the soil and groundwater. Persons who generate, collect, accumulate, or reclaim lead acid batteries are responsible for proper storage, and containment of leaks and spills.

Storage Requirements

- Store batteries on a pallet over a non-reactive, curbed, and sealed surface such as coated concrete or asphalt. A non-reactive, impermeable surface will help insure that acid and lead will not corrode or pass through the pallet and leak into the soil or groundwater. Curbing will prevent leaks and spills from running off the edge.
- Store batteries in an area with no floor drain.
- Inspect batteries weekly for cracks and leaks. Keep a log of your inspections. (If batteries have been exposed to freezing temperatures, inspect them more often.)
- Place cracked or leaking batteries in an acid-resistant, leakproof, closed container, separate from non-leaking batteries. Contain and neutralize (see below) spilled acid.
- If constructing outdoor storage, design so rain, snow, and draining water cannot enter.

Storage Hints

- Have a special storage area, preferably inside. Store the batteries neatly and on pallets. The storage area should be well ventilated.
- Small spills of battery acid can be neutralized with common baking soda, lime, or cement, so keep some handy. The acid will spit and pop when you pour neutralizer on it, so be prepared. Wear protective eye gear and gloves. Contain the spill material and manage it as a hazardous waste.
- A wooden frame lined with heavy polypropylene or a plastic, child-sized swimming pool may be used to store batteries. Check regularly for cracks or tears.
- If storing batteries over asphalt or concrete, coat these surfaces with a good acid-resistant epoxy, fiberglass, or plastic coating, or line the area with heavy polypropylene. If using a polypropylene liner, check it regularly for cracks or tears.
- Sealed five-gallon plastic pails are adequate for storing a leaking or cracked battery.
- Store batteries upright to prevent leaking from the vent holes.
- Stack batteries no more than five high.



Arranging For Transport of Waste Lead Acid Batteries

WDNR provides this information as a summary of applicable laws and rules governing transportation of waste lead acid batteries. Transporters are responsible for knowing and complying with all applicable laws and administrative rules. For specific laws and rules, see statutes and administrative rules.

State and federal laws require waste lead acid batteries to be transported in such a way as to prevent leaking of acid and environmental contamination. Generators may self-transport non-leaking waste lead acid batteries, or hire a licensed solid waste or licensed hazardous waste transporter to ship their batteries off-site. A hazardous waste transporter is required unless the batteries are destined for recycling (see below for more information on transportation requirements). Once the batteries arrive at the broker, the broker must handle them in accordance with ss. NR 610.04(1) and NR 615.04(3) and any applicable provisions of chs. NR 500 through 590, Wis. Adm. Code. Batteries must not be cracked or treated by the broker.

Transportation Requirements

All waste lead acid battery transporters must have appropriate motor carrier authorization in order to operate. They also must be transported in compliance with all Wisconsin DOT and USDOT requirements applicable to "hazardous materials".¹

Haulers are exempt from Wisconsin hazardous waste transportation licensing requirements if the batteries are:

- ultimately destined for recycling;
- transported in good condition, not cracked or leaking fluids; and,
- not transported with any other hazardous wastes.

Hauling non-leaking batteries to a legitimate recycler does not require a solid waste transportation license either. This is because lead acid batteries are considered "salvageable material."

According to s. NR 500.03(230), "salvageable material means junk cars, machinery or equipment, scrap metal or other junk or scrap materials which are of further usefulness mainly as a raw material for reprocessing, or as imperfect stock from which replacement or spare parts can be extracted." Haulers transporting salvageable material are exempt under 502.06(2)(a) Wisconsin Administrative Code, which contains transportation license requirements.

All battery haulers are responsible for environmental safeguards. Batteries should be loaded or braced in such a manner that will prevent them from

- short-circuiting²;
- becoming damaged³; or,
- leaking acid from the vehicle⁴ during transport.

¹ Any waste defined by the Wisconsin Department of Transportation (DOT) to be a "hazardous material" must be transported in compliance with all Wisconsin DOT and USDOT requirements applicable to hazardous waste (chs. TRANS 326 [interstate] & 328 [intrastate]; 49 CRF 107,171,172,173,177,178)

² Do NOT place batteries side-by-side with terminals facing each other.

³ Put a nonmetallic barrier such as thick layers of 200-pound test cardboard, wood braces, or other structural reinforcement between stacked batteries to prevent terminals from puncturing other batteries. Do not rely on terminals to support any weight of stacked batteries.

⁴ Put batteries which were damaged before or during transport in a corrosion-resistant, sealed container.



Storage, Reclaiming, and Recycling

The WDNR regulates waste lead acid battery storage, reclaiming, and recycling. Transporters who store batteries between trips to the reclaimer must follow storage rules for generators summarized above. Preparing batteries for recycling, or "cracking" and smelting lead from batteries requires approval from WDNR. For information on licenses for processing or recycling batteries, contact your WDNR regional waste management specialist.

For a list of battery recycling outlets, contact your WDNR regional Waste Management Program's recycling specialist (see attached map) for a list from the Wisconsin Recycling Markets Directory.



Questions?

Call your DNR Regional waste management program (see attached map) if you have additional questions or consult the NR 500 and 600 series, Wisconsin Administrative Code. You may also want to check on DNR's web site at <http://www.dnr.state.wi.us> or contact your regional waste management program or DNR's Bureau of Cooperative Environmental Assistance at 608/267-9700 for a list of other publications that might be of interest.

Copies of Wisconsin statutes and administrative rules can be purchased from Wisconsin Department of Administration, Document Sales and Distribution, P.O. Box 7840, Madison, WI 53707-7840 or call 608/266-3358. Wisconsin State statutes and some administrative rules are also on the Revisor of Statutes Bureau's world wide web site: <http://www.legis.state.wi.us/rsb/stats.html>.

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Also, this fact sheet is not intended as a substitute for the statutes and rules that apply. Rather, it is a brief summary of the topic. Please consult Wisconsin's statutes and administrative rules for detailed information.

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